



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

May 8, 2024

Neil Maresky
Chief Executive Officer
Pysence Biomedical Ltd.
21 Richmond Street West
Penthouse Suite 1300
Toronto, Ontario MK5 2K1

Re: Pysence Biomedical Ltd.
Amendment No. 2 to Registration Statement on Form F-1
Filed May 7, 2024
File No. 333-276973

Dear Neil Maresky:

We have reviewed your amended registration statement and have the following comment.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe a comment applies to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to this letter, we may have additional comments. Unless we note otherwise, any references to prior comments are to comments in our April 29, 2024, letter.

Amendment No. 2 to Form F-1 filed May 7, 2024

Cover Page

1. We note your response to our prior comment 1 and we reissue the comment. Please revise the cover page to disclose the total potential profit each selling securityholder would realize on an individual basis, expressed as a dollar amount, based on the current trading price of the common shares.

Please contact Tamika Sheppard at 202-551-8346 or Laura Crotty at 202-551-7614 with any other questions.

Neil Maresky
Pysence Biomedical Ltd.
May 8, 2024
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Sincerely,

Division of Corporation Finance
Office of Life Sciences

cc: Ben Reichel